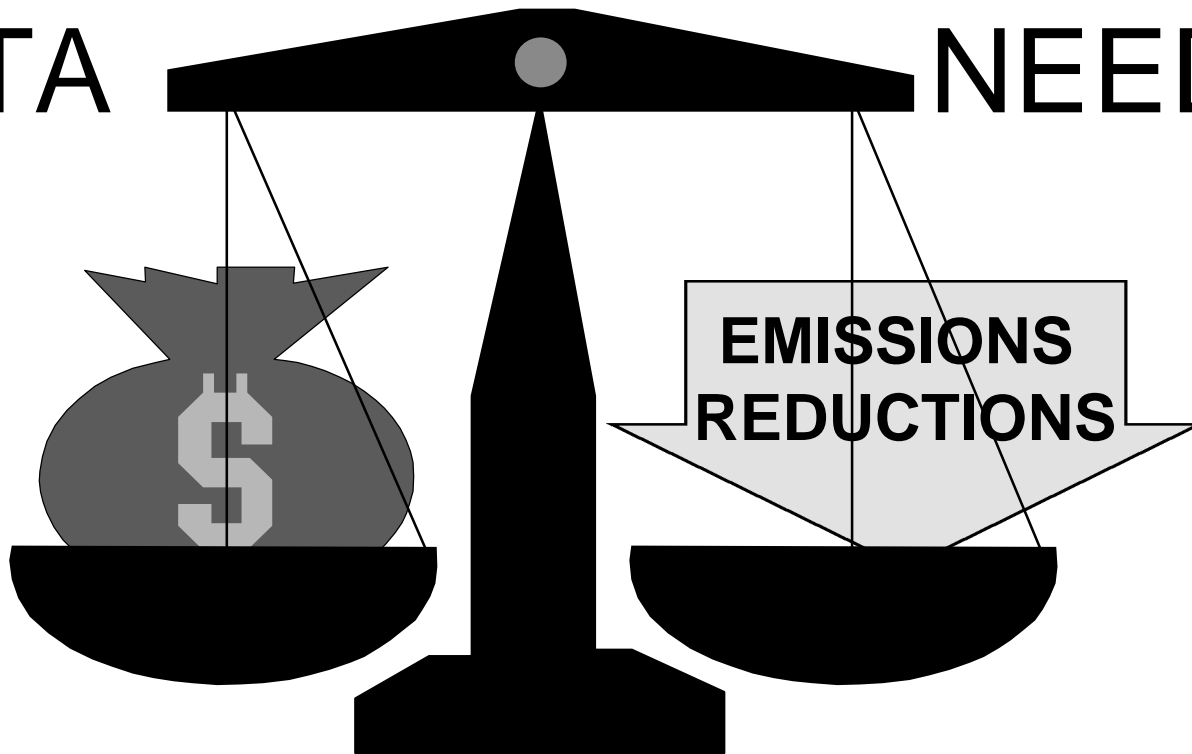


# Cost Effectiveness Analysis for ORVR Compatibility

DATA NEEDS



Monitoring and Laboratory Division  
California Air Resources Board

July 1, 1998

# ORVR Compatibility Board Meetings

- ◆ May 98 - only new and revised
  - did not affect existing certified systems
- ◆ Dec 98 - all certified systems
  - will trigger recertification within 6 months of legal adoption

# Rulemaking Requirements

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- ◆ Quantify environmental impacts
- ◆ Quantify economic impacts
- ◆ Consider all alternatives
- ◆ Choose cost-effective alternative

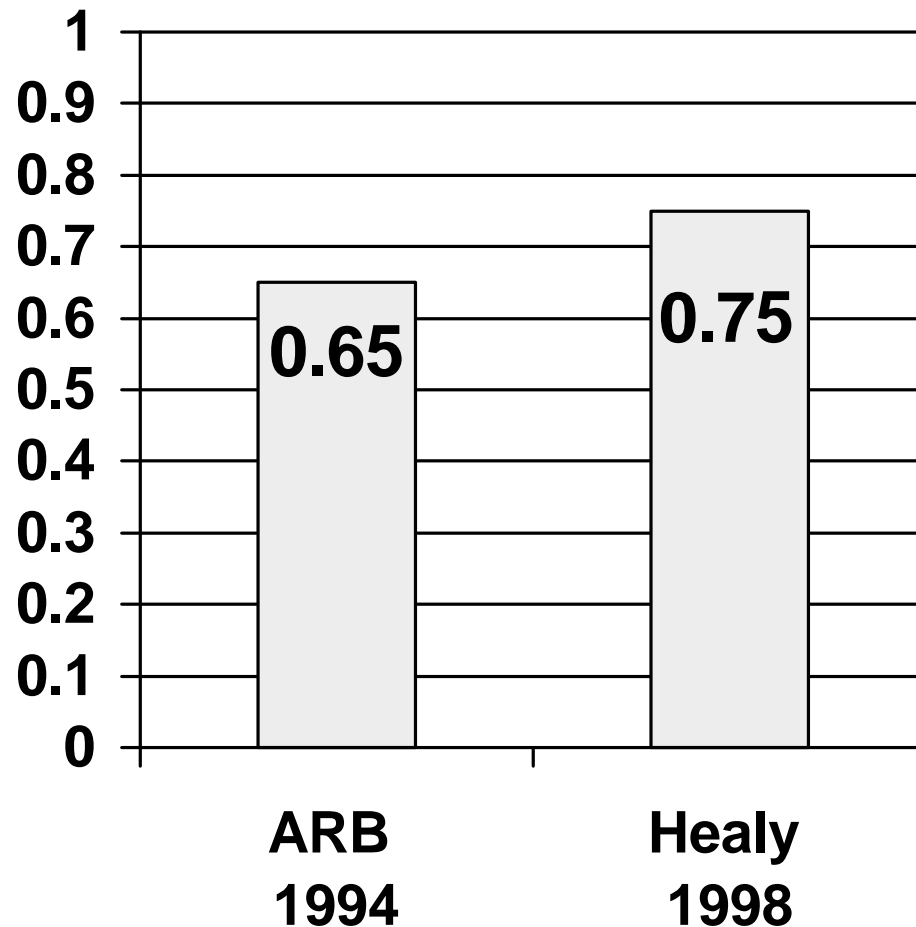
# Environmental Impacts

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- ◆ Significant potential emissions
- ◆ Field validation in progress

# Potential Emissions

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tons/year **per**  
**assist service**  
**station** in year  
2000  
(25% ORVR  
penetration)

# Economic Impacts

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- ◆ identify affected parties
- ◆ quantify costs

# ORVR Stakeholders

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- ◆ VR Equipment Manufacturers
- ◆ Gasoline Dispensing Facilities
- ◆ Gasoline Industry - Trade Organizations
- ◆ Vehicle manufacturers
- ◆ Governmental agencies
- ◆ Public
- ◆ Other??

# Costs for Vapor Recovery Equipment Manufacturers

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- ◆ Cost of developing ORVR compatible systems including design and capital equipment costs associated with their production.
- ◆ Cost of certification of new system(s)
  - application, field testing, ARB staff fees
- ◆ Potential decertification of currently certified systems



# Costs for Gasoline Dispensing Facilities (GDFs)

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- ◆ Replace or retrofit systems for ORVR compatibility within 4 years of legal adoption:
  - How many service stations? (11,300)
  - Percent small business?
  - What kind of systems are installed now?
  - Useful life of equipment?
  - Cost of upgrade or retrofit?

# Costs for Vehicle Manufacturers

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- ◆ alternatives for vehicle-based compatibility
- ◆ costs to implement

# Costs to Government Agencies

- ◆ CARB recertification
- ◆ district GDF permitting
- ◆ other costs??

# Costs to Public

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- ◆ fuel price increases
  - 14 billion gallons/year?
- ◆ other costs?

# Cost/Benefit Comparison

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- ◆ Consumer Products  
\$0.25-0.85 cents/lb HC
- ◆ Clean-Burning Gasoline  
\$3-5/lb (NO<sub>x</sub> and HC)
- ◆ ORVR Compatibility (Healy)  
\$0.80/lb HC

# EVR Schedule

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- ◆ Next Workshop - August 4, 1998
- ◆ Cost/Benefit analysis due Sept. 1, 1998
- ◆ Workshop - Week of Sept. 14, 1998
- ◆ Staff report issued Oct. 23, 1998  
(45-day comment period)
- ◆ Board meeting Dec. 10-11, 1998